

Lakantun language [500 yrs] (LKN/LAK)
Itzaj language [700 yrs] (ITZ)
Mopan language [1000 yrs] (MPN/MOP)

Western Mayan branch [30c TK]

Greater Tzeltalan (Yax Te7) group [19c TK]

Cholan ("Ch'ol") subgroup [14c]

- Yokot'an (Tabasco Chontal) language**
- Ch'ol language**
- %Ch'ol'ti'**
- Ch'orti' language**

Tzeltalan ("B'atz'il K'op") subgroup [14c]

- Tzeltal language**
- Tzotzil language**

Greater Q'anjob'alan /Ra7x Te:7/ group [21c TK]

Chujean subgroup /Ya7ax te7/ [16c TK]

- Tojolab'al language**
- Chuj language**

Q'anjob'alan subgroup [15c TK]

Kotoke/qa-to7k'/cha7x te:7/ language (area) [600 yrs]

- Mochó/mo:cho7/Motozintla/Motozintleco (emergent language)**
- Muchú/mu:chu7/Tuzantán/Tuzanteco (emergent language)**

Q'anjob'al proper /yax te7/ language area [700 yrs]

- Q'anjob'al emergent language**
- Akateko/ku-ti7/ emergent language**
- Popti' (Jakalteko) emergent language**

Eastern Mayan branch [34c TK]

Greater Mamean (Yo:l/Cha7x Tze:7) group [26c TK]

Mamean proper subgroup [15c TK]

Mam/q-yo:l language area

- Northern Mam**
- Southern Mam**
- Western Mam**

Teko language

Ixilan subgroup [??c]

- Awakateko language: PLFM**
- Ixil language**

Greater K'iche'an (Rax Che:7) group [26c TK]

S = Coastal Misteko language area

[San Andrés/Santo Domingo] Chicahuastla Triki emergent

%Sutiaba (Xoteapan) /Maribio emergent language [1200 yrs]

Chiltepec Chinanteko

Matlatzinka-Tlawika/Okwilteko language area [8-9c Kaufman]

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Otomí-Masawa (Otomíán) group [10c Kaufman]
  Otomí language area [8c Kaufman]
    NE Otomí emergent language
    NW Otomí emergent language Ixmiquilpan
    W Otomí emergent language
    Tlapa Otomí emergent language
    E Ixtenco Otomí emergent language
    %Jalisco Otomí emergent language [maybe:
undocumented]

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end of Oto-Mangean

Wavi dialect area [isolate]

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Numic family [18c]
  Western Numic branch/group
  Mono language
  Northern Paiute language
Central Numic branch/group
  Panamint language(?)
    Shoshoni language
    Komanche language(?)
  Southern Numic branch/group
    Kawaiisu language
    Payochi language
      Yuta (aka Ute) dialect
      Southern Paiute dialect
      Chemewevi dialect

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Takic family [24c] REVISE
Serrano-Kitanemuk language area

- Serrano virtual language
- Kitanemuk virtual language
- Kupan branch
 - Luisenyo
- %Gabrielino-Fernandenyo language area [10c]
 - Gabrielino virtual language
 - Fernandenyo virtual language
- Kawiya language
- Kupenyo language
- Hopi isolate

Southern Yuta-Nawan Division [39c]

- Nawan branch [15c]
 - %Pochuteco language
 - Nawa language area [11c]
- Sonoran branch
 - Koran group [15c]
 - Kora language
 - Wichol language
 - Taraumara-Warihiyo (Taraumaran) group [7c]
 - Taraumara language
 - Warihiyo language
 - Odami (Tepiman) group
 - Piman language area
 - O'odam (Pima-Papago) language
 - Pima Bajo
 - Tepewan language area (?)
 - Northern Tepewan
 - Southern Tepehuan-Tepekanos
 - Opatan group
 - %Opata-Jova
 - %Eudeve-Heve
 - %Tubar /tuvali/ isolate
 - Kahita (Yaqui-Mayo) isolate
 - Yaki dialect
 - Mayo dialect
 - %Teweko dialect

The Yuta-Nawan languages spoken in Meso-America are:

- Koran group
 - Kora**

Wichol

Nawa(n) sub-branch/group/ (sub)family [1500 yrs]

%Pochutla/Pochuteco Nawa

Nawa complex/language area [11c]

Northern & Eastern Nawa virtual language

Northern/**Huasteca Nawa** dialect area

Eastern Nawa dialect area

Sierra de Puebla Nawa Zacapoaxtla

Gulf Nawa Mecayapan, Pajapan

Pipil emergent language

Central & Western Nawa virtual language

Central Nawa dialect area

"Classical" Nawa

Mexico Nawa

Orizaba Nawa

Guerrero Nawa

Toluca Nawa

Western Nawa dialect area

Michoacan (Pómaro) Nawa

Durango (Mejicanero) Nawa

Kwitlateko [isolate]

Tarasko/Purépecha [isolate]

Hokan SUPERSTOCK

Northern Hokaṇ [Northern California]

Pomoan family

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%Chimariko language
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%Yana group

Karuk language

%Shasta-Konomihu group

Achu family

Washu language

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%Eselen language
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%Salina language
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Southern Hokaan [Southern California, S Texas, N Mexico, Meso-America]

Yuman-Kochimí family

Seri language

%Pajalat(e) ("Coahuilteco") language

%Yeméan (Comecrudan) group

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%Yué (Cotoname) language
      [Meso-America]
Chontal group
Tol family
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The Hokan languages spoken in Meso-America are:

Chontal language area

Lowland Chontal dialect area
Highland Chontal dialect area

Tol group

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%Western Tol language
Eastern Tol language
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HOW SOUNDS ARE ADAPTED: REGULAR PATTERNS

When source language sound A is absent from borrowing language B, language B replaces it with sound B

sound A	sound B
ʉ	a
ʉw	u [Matlatzinka]
V nasal	V oral
C glottalized	C plain
kw	p
nh	n
r	l
l,r	n (prevocalic);
	t (syllable-final) [Mije-Sokean]
VC#	VCV# [Matlatzinka], V# [Sapoteko,Misteko]
7	ZERO
q	k
e	i OR a [Totonakan]
o	u OR a [Totonakan]
s [retracted]	s OR x

Mije-Sokean *s is retroflex [ʂ] in Mijean, non-retroflex [s] in San Miguel Chimalapa Soke and Ayapa Gulf Sokean, and retracted [s̠] in Santa Mari*a Chimalapa Soke. In other Sokean languages it is plain [s]. A retracted articulation has probably been in place for Mije-Sokean *s for a long time. When a language borrows Mije-Sokean *s as /x/, this is not necessarily evidence that the source of the borrowing was a Mijean language.

Occasionally Mije-Sokean /n/ gets taken over as [l] (cf. Mayan *tuluk'*, 7ul from Mije-Sokean ***tu(7)nuk** 'turkey', 7unu7 'atole'). This suggests

that pre-proto-Mije-Sokean may have had both *n and *l, or that /n/ had an allophone [l].

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chapter 1. The history of the Nawa language group from the earliest times to the sixteenth century: some initial results [posted at PDLMA website]

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Meso-Americanization of Nawa [1-500 CE]

change --

pYuta-Nawan	Wasteko	Nawa	Totonako	pMije-Sokean
SOV	VOS	VOS	?VOS	SOV
Po	Pr	Pr	Pr	Po
GN	NG	NG (~ GN)	NG	GN
RN	NR	NR	NR	RN
A#P#V-AM	P-A-V-AM	A-P-V-AM	A/P-V-AM-A/P	P-A-V-AM

no change --

AN	AN	AN	AN	AN
Nm=Nh	Nm=Nh	Nm=Nh	Nm=Nh	Nm=Nh
#N	#N	#N	#N	#N
DN	DN	DN	DN	DN
N=V	--	N=V	--	N=V

Schematic layout of language distribution in C Mexico, 100-500 CE

Koran

preNawa

Wasteko

Pamean

Mije-Sokean?

Otomi-Masawa

Tarasko

Matlatzinkan
TOLUCA

Totonako
MEXICO

TEOTIWAHKAN

Chinanteko
MORELOS

Mije-Sokean?

Chorotegan
CHOLULA

Tlapaneko
BALSAS

Social contexts for borrowing

In pre-Columbian Meso-America the following social contexts for borrowing can be postulated:

[1] **Trade**, both at short range and over long distances, has been a relevant factor for language contact since at least 1000 BCE. In these contact situations the ascribed social status can be equal or unequal. Borrowing tends to spread from higher status to lower status.

[2] **Expansion and Conquest:** populations have moved into [a] essentially unoccupied areas, or [b] pushed out or [c] assimilated earlier occupants, or [d] been absorbed by those they conquered after having some linguistic effect on the absorbing population. In cases 2a and 2b, linguistic neologisms for formerly unknown natural phenomena would need to be created; in case 2c, terms from the language(s) of the subordinated population could be taken over by the newly dominant language. On the other hand, if the conquered group is not assimilated, terms from both the conquering elite's languages, and well as the languages of the soldiers of the conquering forces, who could have been ethnically different from the elite, will be borrowed into the languages of the subjugated populations.

[3] Alliances between different polities are formed and sealed by **elite intermarriage**; this results in the familiarization of certain ethnic groups with the symbols and terms used by certain other ethnic

Additional evidence for some of the languages of major importance in pre-Columbian Meso-America comes from what I call "yokel anxiety". This first became clear to me when I noted the distribution of phonological changes in Highland Mayan languages that were the same as some that occurred in Ch'olan. In Greater Q'anjob'alán, *nh shifted to /n/ in Q'anjob'al, Akateko, and Tojolab'al, but not in Mochó, Popti' or Chuj; *r shifted to /y/ in all but Mochó; *ty merged with /t/ after some original /t/s had shifted to /ch/; *q shifted to /k/ in Tojolab'al and Chuj, and word initially in Akateko, but remained /q/ otherwise in Greater Q'anjobalan. This made it clear that some Highland Mayan languages underwent change by imitating the accents of Ch'olan speakers. It can be shown that these changes did not occur in the Highland languages at the same time as they did in pre-Greater Tzeltalan, but much later, through the influence of "yokel anxiety".

Later, I saw that most of the Oto-Mangean languages that were associated with major centers of innovation and power had changed certain phonological traits inherited from their ancestor:

- <1> [kw] was changed to [p]: Sapoteko, Chorotegan, Oto-Pamean;
- <2> vowel nasality was lost: Sapoteko, Chorotegan, Matlatzinkan;
- <3> stress on the penult syllable of a word replaced major accentual prominence on the final syllable: Sapoteko (but not Chatino), Misteko-Kwikateko (but not Triki).

In addition, in Chorotegan only, tone has been lost (as attested from data collected in 1942 from the last speaker of Chiapaneko by McQuown, Vivó, and Weitlaner).

These traits seem to be due to imitating the accents of Mayans, Totonakans, or Mije-Sokeans. Speakers of all of these languages would have had difficulty pronouncing [kw], vowel nasality, and tones. Being in a favored position culturally, Mije-Sokeans and Totonakans may have made fun of the way Oto-Mangeans sounded even when speaking their own languages. By eliminating from their own languages sounds that Mije-Sokeans and Totonakans could not pronounce and found odd, Oto-Mangeans with aspirations to greatness may have thereby hoped to achieve a sense of being more cultivated. In Sapotekan, these traits co-occur with lexical borrowings from Sokean, which nails down the source of the influence, since only Mije-Sokean has consistent non-final stress. In Matlatzinkan and Chorotegan, the borrowed traits (which do not include accent shift) seem to show that a language of at least one among the three families named above -- Mije-Sokean, Totonakan, or Mayan -- was a major influence in central Mexico -- and I have shown in 'The history of the Nawa language group from the earliest times to the sixteenth century: some initial results' (Kaufman 2001 "Nawa") how the influence of Mije-Sokean was a paramount (though not unique) influence in the Meso-Americanization of Nawa.

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      PAJALAT
            YUÉ
            YEMÉ
                  x
              x       x
          x         x
              x       x
              x       x
              x       x
              x       x
          x x x x   x
        x     x    x
<= KORAN  x pre-Nawa x
          x       x
          x x x x   x
              x
              Wastekan
x x x      Pamean           x
      x             x
          x         x
          x       Otomían   x
          x       x x x x x x
          x       x       Tepewa
Tarasko  x       x       x x
          x       x Totonako x x
          x       x NMijeSokean x x x x
          x       x [Teotihuacán] x
          x Matlatzinkan x x x x x x x
          x [Toluca]           x [Veracruz]
          x             x 19N
          x       Chorotegan
          x       [Cholula]
x       Chinanteko           x
          x       x       OLMECS
          x       x       SMijeSokean => Sokean
          x       x       &
          x       x       EPI-OLMECS
          x       Chochoan       Sokean
          x       Masateko
          x       Misteko
          x       Kwikateko       Mijean
          x       Sapoteko
          [Acapulco]       Triki
                          Amusgo
                          Chatino
                              Chontal

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Most of the languages of central Mexico (listed below), most importantly General Nawa, have numerous loanwords from Mije-Sokean, and certain specific kinds of phonological influence. There must have been a population of Mije-Sokean speakers in or near the Basin of Mexico before 500 CE, because Nawa, which spread out from the Basin of Mexico starting around 800 CE, already had a sizeable number of Mije-Sokean loans and its grammar showed the effects of contact with a Mije-Sokean language.

Currently Nawa has verb-initial word order, usually VOS, sometimes VSO; it has NG ["Noun-Genitive", possessed noun - possessing noun] word order: all this is Mayan-like, and probably due to Mayan influence in central Mexico in the Epi-Classic (800-900), which also affected the word-order patterns of Matlatzinkan and Otomíán. Earlier, in the process of undergoing Meso-Americanization in contact with Mije-Sokean after 500 CE, Nawa had probably acquired Mije-Sokean (Epi-Olmec-like) word order [SOV, SV/VS, AN, GN, Po]: this means that Nawas could conceivably have produced the Xochicalco inscriptions. However, while Matlatzinka is the source of at least one loan into Sapoteko, Matlatzinka itself has no Nawa loans to speak of (Tlawika, its sister, separated by ca. 800-900 years of time depth, is not well documented lexically, but the same generalizations should eventually apply to it, though it seems to have a few more Nawa loans than Matlatzinka).

These are the languages of Northern Meso-America and Northern Mexico that have taken over borrowings from Mije-Sokean:

the base population was Totonako-speaking, and that the superimposed elite spoke (Northern) Mije-Sokean, it is worth separating out the suggested Mije-Sokean loanwords into Totonako to see just how deep the Mije-Sokean influence might have been. In the compiling of this list, a fair number of the items that have in other studies been suggested as evidence for a genetic connexion between Totonakan and Mije-Sokean, under the "Macro-Mayan hypothesis" have been included, on the assumption that many or most such comparisons are simply the result of borrowing from Mije-Sokean to Totonako. Three items that might show the effects of sound symbolism are also included. There is a total of 49 suggested borrowings from Mije-Sokean to Totonako. At least 30 of these are also found in Tepewa. The coexistence of Mije-Sokean and Totonako at Teotihuacán lasted at least 700 years, from 150 BCE to 550 CE, and probably had a pre-150 BCE stage as well. The contact between the two languages was probably intimate, that is, it involved a fair degree of bilingualism and intermarriage.

Note that these 49 (51?) loans from Mije-Sokean into Totonako constitute a greater amount of lexical diffusion than has been detected anywhere else in ancient Meso-America, except for that between Ch'olan and Yukatekan languages. This latter diffusion resulted from their participation over 900 years and more in a major interaction sphere -- Lowland Mayan civilization. That interaction also involved a dominant and a subordinate partner, resulting in far more loans into Yukatekan than from it. The level of diffusion from Mije-Sokean into Totonako was apparently less than from Ch'olan into Yukatekan, suggesting less integration and/or less contact time and/or a smaller numerical presence of Mije-Sokeans relative to Totonakos than of Ch'olans relative to Yukatekans. (The extinction of Northern Mije-Sokean precludes the possibility of identifying any borrowings that may have been made into it from Totonako.)

The presence of at least 33 Mije-Sokean loans in Tepewa could be explained either as borrowing into proto-Totonakan before 600 BCE or diffusion from Totonako to its neighbor Tepewa after 600 BCE; probably both phenomena were relevant. All Mije-Sokean loans found in Tepewa are also found in Totonako; this makes the hypothesis that Totonako was the intermediary between Mije-Sokean and Tepewa the most likely explanation in the majority of cases. None of the Mije-Sokean loans into languages of Southern Meso-America (presented below) has a representative in Tepewa. This is further support for the idea that Tepewa never had an independent interface with the Mije-Sokean language of the Teotihuacan elite.

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Mije-Sokean loans in northern Meso-America			
	lex	phon gram synt	
[a] Northeastern Mexico			
Pajalat	2-3 items		1
Yeme*	3 items	3	

[b] Northeasternmost Meso-America			
Wasteko	12 items	12	
[c] Zacatecas [?]			
Nawa	18 items		1
[d] Basin of Mexico			
Otomi*-Masawa	6 items		
Matlatzinka-Okwilteko	9 items		1
Tarasko	17 items	17	
Totonako-Tepewa	50 items	50	
[e] Southeast of Basin of Mexico => Chiapas			
[Chorotegan]	3-8 items	2	2
[f] Southwest of Basin of Mexico => Oaxaca			
[Chinanteko]	12 items		

The likely time period for these loans is between 1500 BCE and 1 CE -- a very wide time span, but currently there have been no clues noted for breaking the borrowings down by time period.

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evidence for Mije-Sokean in the Basin of Mexico

lexical
listed below/elsewhere

phonetic
no [kw] => Chorotegan, Oto-Pamean
no nasal vowels => Chorotegan, Matlatzinkan
no tones => Chorotegan

grammatical
*7i+ 3ERG => Nawa
ka NEG => Yeme
*ko 'plus' => Pajalat, Totonako
quinary-vigesimal counting => Nawa
ti 'what?' => Yeme, Chorotega

syntactic => Xochicalco
SOV
SV with unergatives
SV ~ VS with unaccusatives and predicate nominals

why the Mije-Sokean language of the Basin of Mexico was neither Mijean nor Sokean

- [a] probably predates split of Mijean and Sokean
- [b] some of the MS loans are found otherwise only in Sokean,

Sokeans and Totonakos, inasmuch as both had a heavy impact on Nawa word formation.

The number of Nawa lexical borrowings from Mije-Sokean is 14; the number from Totonako is 15. The semantics of the lexical borrowings may reflect some differences in the nature of the interaction Nawas had with these two groups, plausibly reflecting the relatively low status Nawas would have had on first entering into Meso-America. Words for animals and for household tools, containers, and activities come from both Mije-Sokean and Totonako in comparable numbers. The biggest difference in the nature of lexical diffusion from Totonako and Mije-Sokean is that, except for the non-local 'cacao', all plant names are borrowed from Totonako, suggesting that the base population was Totonako. Two kin terms ('man's brother-in-law', 'man's elder sister') are from Totonako, suggesting that Nawas had family ties with Totonakos. No kin terms come from Mije-Sokean (The possible borrowing of Mije-Sokean 'child' refers to a life stage and not a kin type). In contrast, the only two seriously high status items, 'mat', and 'shape-shifter/person' are from Mije-Sokean.

EARLY PRECLASSIC

2200-1800 BCE: Wastekans leave homeland in Guatemalan highlands and settle on Central and Northern Veracruz Coast.

Influence on Wastekan from now-submerged languages of NE Mexico (Pajalat, aka "Coahuilteco" and Yemé aka "Comecrudo") and onto them from Wastekan

In 1500, from the evidence cited in Gerhard 1982:358-360, the Wastekos controlled and patrolled as far north as present-day Ciudad Victoria and Soto la Marina (ca. 24°30'N). This means that they were within reasonable distance of the Rio Grande (Rio Bravo del Norte) near which representatives of Pajalat (aka Coahuilteco), Yué (aka Cotoname), and Yemé (aka "Comecrudo", "Mulato", "Carrizo", "Garza", Mamulique) were all to be found at least as of the mid 1700s. Given the higher level of social organization and technology among the Wastekos, the flow of loanwords must largely have been from Wasteko to the other languages of the area. At this time the Pames and Olives, who were in contact with Wasteko in the early colonial period as of ca. 1600, were probably to be found in North Central Mexico.

Loans between Wasteko and Languages of Northeast Mexico

1. *Animals and Animal Parts*: nothing
2. *Plants and Plant Parts*: nothing
3. *Technology: Tools and Techniques*: nothing
4. *Calendar, Ideology, and Belief*

Pajalat shows vigesimal numeration, diffused northward from Meso-America; Wasteko might seem the best candidate, but **ko** 'and, plus' (in numeral expressions) is borrowed from Mije-Sokean.

5. *Kinship and Social Organization*

Pajalat **kwita:l** 'man's elder sister'
 => Wasteko *kwito:l* 'boy'

Pajalat **t'ata:l** 'woman's elder brother'
 => Wasteko *ʔata:tal* 'man's brother' (Potosí), 'fellow, brother-in-law' (Veracruz). The Wasteko form has no known Mayan cognates.

Pajalat **<tzu:tzan>** 'woman's younger sister'
 => Wasteko *tx'u:tx'* 'younger kinsman'. The Wasteko form has no known cognates in other Mayan languages.

For the preceding three items we are in fact not sure that the words did not originate in Wasteko and spread to Pajalat, only that they have no Mayan etymologies.

Pajalat **mamo:w** 'male first cousin'
 => Wasteko *momob* 'grandchild'.

Wasteko exhibits a number of kin terms which are quite similar to forms in Pajalat and Yemé. This one has no clear cognates with other Mayan languages, though proto-Mayan **ma:m-a:b'* 'grandfather, man's grandchild (pl.)' is a conceivable source.

Wasteko **baay** 'brother-in-law' <= proto-Mayan ***b'al**
 => Pajalat *p'a:y* 'man's younger brother's offspring'

6. *Basic Vocabulary and Grammar*

Yemé **#pakam** 'full', **#pakmat** 'big', **#paknah** 'high'
 => Wasteko *pak-at*, *pak-thaʔ* 'big'

Wasteko **txam ~ txem** 'to die' <= proto-Mayan ***kam**
 => Pajalat **<tzam>** 'to die',
 Yemé **#kamaw** 'to kill'.

Wasteko **jaay** <= proto-Mayan ***jar** 'how many?'
 => Pajalat *jat* 'how many?'

Wasteko **kal-e** 'to go'
Pajalat *ka(:)l* 'to go'

Wasteko **kweteem** 'alone'
Yemé *#kweten* 'one'

Wasteko **maap** <= proto-Mayan **ma(:)p* 'coyol palm'
=> Yemé (= Comecrudo) *#mape7* 'finger, hand, arm'. In many Meso-American languages, including Mayan and Mije-Sokean, the word for 'ring' is a compound, 'coyol-hand' (cf. K'iche'an *map-q'ab* 'ring' ['coyol-hand']). The semantic divergence seen here makes this a weak comparison.

Since these languages are very poorly attested, the small amount of currently uncoverable evidence for contact between them and Wasteko should not be taken as reflecting the true degree of mutual influence between Wastekan on the one hand and Pajalat and Yemé on the other.

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Loans between (pre-)Wasteko and Oto-Pamean/Tarasko/Nawa

Six loans from Mayan into languages of Central Mexico show a very early stage of phonological development: *k* for Mayan **k*, which shifted to *ch* in attested Wasteko and Ch'olan; *nh* for Mayan **nh*, which shifted to *w*, *y*, *j*, or *7* in Wasteko and to *n* in Ch'olan. Since we have no reason to assume any other Mayans in Northern Meso-America except Wastekans and Ch'olans, *the phonology under discussion must reflect pre-Wastekan, and the location of pre-Wastekan must have included the Basin of Mexico for at least some period of time.* The reflexes of proto-Mayan **so7tz* 'bat' as Oto-Pamean **tzoa-tz7* are consistent with the early Mayan pronunciation, but not with Ch'olan **su(:)tz* or Wasteko *thut*'. If this analysis is correct, it provides additional evidence that Wastekan shifted Mayan **k*, **k'* to *ch*, *ch'* independently of the similar (but limited) shift in Greater Tzeltalan. All the cases of "early Mayan" cited below are to be understood as **pre-proto-Wastekan**.

early Mayan ***kam** 'to die' (not from Ch'olan **chäm*, and from not from Wasteko *txem-* ~ *txam-*)

Tarasko *khamá-* 'acabarse' (Velásquez.157, Swadesh.96)

early Mayan ***ka:b** 'bee; honey' (not from Ch'olan **chab*', and not from the immediate source of Wasteko *tsabtsam* 'pineapple')

Tarasko *kapárho* 'bumblebee' (*jicote*, *abejorro*) (Velásquez.143);
<*kapári*> 'colmena grande' (Lathrop); <*kapá-r(h)i*> 'abeja grande' (Swadesh.90)

2. Plants and Plant Parts

3. Technology: Tools and Techniques

4. Kinship and Social Organization:

5. Calendar, Ideology, and Belief

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6. Basic Vocabulary and Grammar

*7i+	'third person Ergative proclitic agreement marker'
*ti	'what?'
*min7	'to come'
*tzu7tz	'to suck' [This item may show sound symbolism]
*tza:m7	'to ripen'
*tin	'shit'

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Mije-Sokean loans found in Southern Meso-America only [ca 80 items]

from Mije-Sokean [33] from Sokean [32]

from Mijean [16]

1. animals, etc.

*7a:wa7t	louse	*jun=j@y@	agouti	*ke:m(A)	peccary
*tzu:k	mouse			*ma+ke7ch	cockroach
#tzuku	caterpillar	*peki7	shoulder	*kuxo7ojk	quail
*tzum	rattle	*7amu	spider	*wa:[h]x	fox
*taka7	bald	*we:tu7	fox		
		*7akaw	wasp		

2. plants, etc.

*kawak	sapodilla	*nakpat	cactus fruit	*tzi7wa	yellow squash
*ko:ya:7	tomato	*7ow	avocado		
*s@k	bean	*koyonh	yucca		
*tatz@7	cocoplum	*tz@wi	tobacco		
*t@m	fruit	*sapane	zapote		
*tu:tz	palm	*patajaC	guava		

3. technology, etc.

*maj.ku7y	water jug	*tzitza	net	*katzE	basket
*way	to grind corn				
		*toto7	paper	*noki	paper
*j@tz	to grind leached corn				
		*patz	to trap	*pu7j@k	wax
*tuk	to cut	*pe7t	to braid	*to7o	tortilla basket
		*tzum	to tie	*to7k-I	woven mat

4. social organization, etc.

*7atzi7	elder	*t@w@	kinsman	*j@y@	man's brother-in-law
*ma:ma	mother				

5. calendar, etc.

*7owa	macaw	*kum-kuy7	town	#juun	iguana
*ka:jaw	jaguar	*m@7a	deer	*jay=tzu7	deer
*pa:=ju7	coyote	*saj	fathom		

(in turn borrowed from proto-Sokean ***mu7a** 'deer')
=> Yukateko *manik'*, Ch'ol #*manich* 'dayname "deer"'

proto-Sapoteko ***kwe7kku7** [pe7kku7] 'dog' (in turn borrowed from proto-Mije-Sokean ***7uku**) (after split of Western Sapoteko and Papabuco, ca 600 CE)
=> Yukateko *pe:k'*

Sapoteko <*lapa*>, <*laba*> /*lapa*/ day name (corresponding to 'Venus')
=> *lam(b')at* several Mayan languages' day name (corresponding to 'Venus') (Justeson et al. 1985:21). Source of final /t/ in Mayan is unexplained.

=====

Sapoteko influence on Tarasko: during early Classic when there was regular contact between Monte Albán and Teotihuacán

proto-Sapotekan ***tze7a** 'to get hot'
Tarasko <*tsá-ni*> '(hierro) estar caliente' (to be hot)
(Velásquez.206, Lathrop.81)

proto-Sapotekan ***tza** 'day'; ***ko+ kwitza** 'sun; day'
Tarasko *tza-* 'clear, bright' (Swadesh.140)

=====

Sapoteko influence on Wasteko after 300 BCE and before 500 CE

pre-proto-Sapoteko ***kwetyak** <= ?***kwe+ Vtyak** (Juchitán *bere*) 'chicken'
=> Wasteko: Potosino *piita7*, Central *kwita7* 'chicken'
[This happened at about the time that proto-Sapotekan ***kw** shifted to /p/ in (pre-)proto-Sapoteko. The gloss 'chicken' is a post-conquest shift away from 'pheasant' or 'turkey' or other gallinaceous bird]
(No analog to Wasteko *piita7* ~ *kwita7* is known from Kabil)

proto-Sapoteko ***kwe7kku7** [pe7kku7] (in turn borrowed from proto-Mije-Sokean ***7uku**) (after split of Western Sapoteko and Papabuco, ca. 600 CE)
=> Wasteko *pik'o7*; *piikw'-al* [possessed theme]; Kabil has [sul]:
cf. Wasteko *thulul* 'paca'
[This happened after Mayan ***k** had shifted to /ch/ in Wasteko.]

proto-Sapoteko ***kwe+ tzina** [pe+ tzina] 'deer'
=> Wasteko *bityim* 'horse', Kabil [witim]

proto-Sapoteko ***ta:7a**; Juchitán Sapoteko *daa*, Atepec Sapoteko *ta!7a*, Chatino /ha(a)7/ (*h* < **t*), proto-Sapotekan ***ta:7** 'woven mat' (*petate*)
=> Wasteko *ta:t*, Kabil [tat]

cf. ?? Papantla Totonako (*láqs-*)*taw* 'woven of reed or palm' (*ayate, huacal, algo tejido de tarro o palma*) (*láqs-* 'split')
 cf. Tarasko *tátzekwa* 'woven mat' (*petate*) (Velásquez.196);
 <*tahtzí-ri*> 'petate, estera' (Swadesh.130)

proto-Sapoteko **kwe+ xitzu7* [pe+ xitzu7] 'coati'; Juchitán Sapoteko *bi-zhiidxu*, Atepec Sapoteko *be-zhitzù7* 'coati' (*tejón*); cf. Atepec Sapoteko *be-zhe7* 'raccoon' (*mapache*); Tataltepec Chatino *chu7* 'coati'

=> Wasteko *bexe7*

cf. Nawa *pe:soh-tli* 'coati' (This is the source of CA Spanish *pizote*); Kabil has [pesu], from Nawa

cf. Zapotitlán Totonako *pa7x-ni7* 'pig'; Papantla Totonako *pa7x-ni*

Wasteko *tuthay ~ tuthey* (< earlier *tusey?) 'tomato' can be compared to proto-Sapotekan **kwe+ ttyu:xxi(k)*, and to the following Masatekan forms, which probably go back to **chuti*: Chocho-Popoloka *chuti ~ yuti*, Ichkateko *tyu-xti* [21], and proto-Masateko **chjuti ~ *xuti*. Sapotekan is probably the more likely source of the Wasteko form. Kabil has [tusay]

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Sapoteko influence on Nawa after 500 CE

**xi=ka7 ~ *k+eka* 'gourd dipper'

=> Nawa *xi:kal-li*

=====

There is a moderate degree of **Sapoteko influence on neighboring languages of Oaxaca:**

The loans are mostly into Wavi, Chontal, Soke of Oaxaca, and Mije, and mostly stem from Isthmus Sapoteko. This probably reflects the spread of the Sapotekos as a superordinate population into Southeastern Oaxaca a few generations before 1500. The borrowed terms mostly are plant names.

=====

Sapoteko influence on neighboring Oaxacan languages [11 items]

1. Animals and Animal Parts

Juchitán Sapoteko *bere gídxa* 'roadrunner' (literally 'crazy chicken')

=> Oaxaca Soke *beregicha*

2. Plants and Plant Parts

proto-Sapoteko ***kwe(t)te (ya7a)** 'goosefoot'; Juchitán Sapoteko *bi-dyaa*, Atepec Sapoteko *be!tte!* 'epazote' (goosefoot: plant used for condiment, cooked with beans)

San Mateo del Mar Wavi *pi:d* <= proto-Wavi **pihti*

Juchitán Sapoteko *ndo!7pa* 'large gourd' (*jícara grande*)

Wavi *ndop* <= proto-Wavi **ntopo* 'gourd bowl' (*jícara*) [534a]

proto-Sapoteko ***se7a** " 'elote' (roasting ear) (cf. proto-Misteko **sa yuu&* 'corncob')

proto-Wavi **asa* [10]

Juchitán Sapoteko *du7ga7* 'amate, fig'

proto-Misteko **ndoko* 'anona' (custard apple)); San Juan Colorado Misteko *ndoko* 'guanábana' (soursop species), Chayuco Misteko *ndoko* 'custard apple' (*anona*), San Miguel el Grande Misteko *ndoko* 'zapote'

San Mateo del Mar Wavi *tok* 'fig tree', *tok tel* chokecherry' (*capulín*) <= proto-Wavi **toko* 'big fig' (*higo grande*) [883]

proto-Sapoteko ***tokwa7** 'maguey' (century plant); Juchitán Sapoteko *duba*; cf. Atepec Sapoteko *tu!(w)a!7*

Wavi *top* <= proto-Wavi **to(m)po* [887]

Cf. ?? Amusgo *tzja7 ndua* 'ixtle' (century plant fiber)

proto-Sapoteko ***kwe+ to7wa** 'plantain'; Juchitán Sapoteko *bi-dwaa* 'banana' (*plátano*), Atepec Sapoteko *be-tu(w)a7* 'banana'

Triki *na-to* [4] 'banana' (*plátano*) ('mamey' in compounds); *reko duwa* [4,3] 'custard apple' (*anona*, *chirimoya*) (*reko7o* 'country' [monte])

proto-Chinanteko **tah7* [LH] ?'zapote' [Rensch 38]; **ta:* [L] 'banana' [Rensch 43]; **ta:* [H] 'mamey seed' [Rensch 41]

?? Amusgo *ndo?* 'zapotillo' (sapodilla), *t3=ntyē7* 'zapote negro' (black zapote)

[The banana and various plantains were introduced by the Spanish. Where the Spanish terms *plátano* or *guineo* were not borrowed, Meso-Americans have taken the name of a native plant, particularly a member of the zapote family, and applied it to the banana or plantain.]

proto-Sapotekan ***y-exxu ~ *k-exxu**; Juchitán Sapoteko *yaxu* 'avocado' (*aguacate*), Atepec Sapoteko *exxu* 'avocado species' (*aguacate oloroso*, *aguacate de anís*)

Tataltepec Chatino *k-i!xù* [2'] 'avocado'

San Mateo del Mar Wavi *yax ~ iyax* 'avocado' <= proto-Wavi **yese* ? [TK]

3. Technology: Tools and Techniques

proto-Sapoteko ***tyokwa**; Juchitán Sapoteko *ru7ba* 'tenate' (handleless basket, woven bag), Atepec Sapoteko *ru!ba*; cf. Tataltepec Chatino *tukwV* 'tenate' (handleless basket)

Oaxaca Chontal 7al-duba 'tenate' (handleless palm-leaf basket)

4. Kinship and Social Organization

Juchitán Sapoteko xunku 'youngest child'

=> Oaxaca Soke xunku7

=> Chiapaneko <shingoue nbaña> /cinkowe npanya/ 'u*ltimo

hijo'

[this work is probably not native to Sapoteko because of the /nk/ cluster, which should have [g].

5. Calendar, Ideology, and Belief: nothing

6. Basic Vocabulary and Grammar

proto-Sapotekan *ti+ yaka ~ *n-aka(7) 'ear' <= proto-Oto-Mangean **ka 'ear'

proto-Wavi *-lahka [371]

=====

Strange similarities between languages in Oaxaca.

There are some similarities between Mije, WSoke, Sapoteko, and (Ayutla) Misteko that can only be the result of contact and diffusion. These items are of special interest because they are grammatical morphemes.

<u>Mije</u>	<u>WSoke</u>	<u>JCH Sapoteko</u>	<u>AYU Misteko</u>
*ti 'what'	ti(yu) 'what'	pur-ti!7 'why' ga-x-ti!7 'nothing' x-ti7 'owned thing' COR <xi-teni ~ xi-tini>	
*ka 'NEG'		ka! ~ ke! ~ ki! 'NEG'; ko7 'no!' ga-x-ti!7 'nothing' [also NSap]	
	ka(7) 'yon'	+ka, n-ga 'that (near you)' [also NSap] za+ ka 'thus' 'thus'	kaà 'yonder' sà-kan7

In Sapotekan, forms like [ti] 'what' and [ka] 'not' are found only in Central and Northern Sapoteko, not in other Sapotekan; but they are native in Mije-Sokean. In Mije-Sokean, forms like [ka] 'that' are found only in Western Soke; but they are native to Eastern Oto-Mangean. The first two are Mije-Sokean items that have spread to Sapoteko, and the last is an Oto-Mangean item that has spread to Western Soke.

When and where did these events take place? Northern and Central Sapoteko border on Mije-Sokean languages now and probably always have. Plausibly, Isthmus Sapoteko (and Eastern Sapoteko generally) spread at the expense of one or more Mije-Sokean languages; if just one, then a Mije language. This may have been as late as 1300-1400 CE, but for features common to Central and Northern Sapoteko, as early as 900-1000 CE.

At Monte Alban, in the proto-Classic, the Mound J "Conquest Slabs" show defeated/conquered individuals with plausibly post-Olmecoid paraphernalia and descriptive rather than calendrical names. These may have been Mije-Sokean speakers defeated during the Sapoteko expansion northward out of the Valley of Oaxaca. The Mound J Conquest Slabs belong to the Monte Albán II phase, datable to 100 BCE - 200 CE.

All forms of Sapoteko (as opposed to Chatino), in addition to several lexical borrowings, show important linguistic influences that can be attributed to imitation of the speech habits of Mije-Sokean speakers: penult stress, no nasalized vowels, [p] instead of [kw]. These can be dated 400 BCE to 400 CE.

Thus we can construct a picture something like this.

From 1500 to 500 BCE, Sapotekan had its home territory in the Valley of Oaxaca. To the west were Mistekans. To the south and southwest were unknown peoples absorbed by Sapotekos and Chatinos after 500 BCE. To the north were Masatekans, and Olmecs (who spoke common Southern Mije-Sokean until 1000 BCE, and pre-proto-Sokean thereafter. To the east were Mije-Sokean speakers, Chontals, and Wavis. After 500 BCE, Chatino split off and headed towards the southwest. After 500 BCE (thus in the Epi-Olmec period), a form of Sapotekan ancestral to proto-Sapoteko (but not to Chatino) accepted linguistic influence from Mije-Sokean. We can date the diversification of Sapoteko proper to after 500 CE (transition from Early Classic to Late Classic). The Conquest Slabs basically date to the first century BCE (Late Pre-Classic). This is a plausible time for the Mije-Sokean influence that is common to all forms of Sapoteko to have been transmitted.

Lexically, Chatino, Lachixío, Papabuko, and Southern Sapoteko all share traits that are in contrast with traits found in Central and Northern Sapoteko: this makes the latter look like innovations. The separation between C&N versus the rest may date from about 900-1000 CE, at the Epi-Classic, or end of the Late Classic Period. Some of these innovations, like [ka] 'neg', seem to have originated in Mije-Sokean.

Sokes in Oaxaca (in the Chimalapa region) seem to have spread into this area from Chiapas after 1200 CE (end of Early Post-Classic). They are currently in contact with Eastern/Lowland Mije and Isthmus Sapoteko. The Mijes were plausibly already there before 1200 CE and the Sapotekos came in after 1300 CE. [ka] 'yon' would have been

borrowed from Central Sapoteko after 1300 CE.

+++++

600-900 CE: LATE CLASSIC

600 CE: Ch'olan breaks up into western (Yokot'an [= "Chontal"] and Ch'ol) and eastern (Ch'olti').

600 CE: Tzeltalan Proper breaks up into Tzeltal and Tzotzil.

600 CE: Ixilan breaks up into Ixil and Awakateko.

600 CE: Sokean diversifies into Gulf Sokean and Soke Proper

600 CE: Pame begins to diversify.

600 CE: Sapoteko begins to diversify.

700 CE: Lowland Mayan (Ch'olan, probably Yokot'an = Chontal Mayan) incursions into basin of Mexico

<a> influencing Xochicalco and Cacaxtla architecture and iconography

 Lowland Mayan lexical influence on Wasteko, Otomían, Matlatzinkan, Tarasko, Totonako, and Nawa

<c> Mayan morphosyntactic influence on Nawa, Otomí-Masawa, Matlatzinka-Tlawika: VOS, AN, NG [partial in Nawa]; on Oto-Pamean but not Nawa: morphology of AM, subject, object, and possessor marking

=====

Ch'olan loans in Wasteko

These items may all have come specifically from Chontal/Yokot'an

Chontal Mayan **säk=tok'** 'egg' (literally 'white flint')

Wasteko *thaktyok'* 'egg' (unanalyzable)

Greater Tzeltalan ***tak'in** 'metal, money' (literally 'shit of sun')

Wasteko <*taquin*> 'money' (unanalyzable)

Greater Tzeltalan ***chikin=te7** 'tree-ear' (literally 'ear of tree')

Wasteko *txikinte7* 'tree-ear' (unanalyzable)

Lowland Mayan **#säk=taam** (ethnonym or profession)

Wasteko *thaktyaam* 'Nawa'

Soteapan Gulf Sokean *saktam* 'Spanish-speaker'

proto-Tzeltalan **säktäm* ~ **säktän* 'Chiapa(nec)'

Originally this word must have meant 'pushy foreigner'.

%%%

Mayan loans in Otomí

Greater Lowland Mayan area languages **#ne:n** 'mirror'

Otomí *hnye* 'mirror' (*espejo*)

Masawa *hnyehe* 'mirror'

%%

Mayan loans in Matlatzinka

proto-Mayan ***tzuhh**

Matlatzinka *tz7u=mo* [L,HL] 'bottle gourd'

proto-Mayan ***tz'u:nu7n** 'hummingbird'

Matlatzinka *tz7uru* [H,LL] 'hummingbird'

cf. Tarasko <*tsintsúni*> 'colibrí' (Velásquez.209)

cf. Tlapaneko *tz7utzun* [32] 'picaflor' [Suárez 402]

cf. Xinka (G) *tz'uru:ru*(7)

cf. Tol *t'unun*

cf. Cacaopera *súru* (Campbell), *sur* (Lehmann).

(This may in part be a Wanderwort)

proto-Mayan ***mahy** 'tobacco'

Matlatzinka *miji* [HHL] 'tabaco' <= earlier [mi:h]

%%

Mayan loans in Tarasko

proto-Mayan ***tze7h**; Ch'olan ***tzih** raw'

Tarasko <*tzí-ri*> 'crudo' (Swadesh, Velásquez.210), <*tsí-piti*> (Velásquez.209)

proto-Mayan ***ji7q'** 'to hiccup'

Tarasko <*jikí-ni*> 'hipar, tener hipo' (Swadesh, Velásquez.135)

proto-Chinanteko *ji&7nh* 'to hiccup' [Rensch 496]

(Sound symbolism may be the case here, but this does not preclude borrowing)

proto-Mayan ***tz'u:nu7n** 'hummingbird'

Tarasko <*tsintsúni*> 'colibrí' (Velásquez.209)

cf. Matlatzinka *tz7uru* [H,LL] 'hummingbird'

cf. Tlapaneko *tz7utzun* [32] 'picaflor' [Suárez 402]

cf. Xinka (G) *tz'uru:ru*(7)

cf. Tol *t'unun*

cf. Cacaopera *súru* (Campbell), *sur* (Lehmann).

(This may be a Wanderwort)

Chontal Mayan **wichu7** 'dog'

Tarasko <*vichu*> *witxu* 'dog' (Gilberti)

%%

Mayan loans in Totonako

Eastern Mayan (Mamean-K'iche'an) ***tahpa7l** 'nance (nanche)' (fruit species)

Zapotitlán Totonako *tapa* 'zapote species' (*zapote borracho*); cf.
 Papantla Totonako *tu:pa* 'zapote calentura'
 cf. Xinka (M,Ch,J,G) *taapa* 'nance -- fruta'
 cf. Cacaoopera *tapá* 'zapote'
 It is hard to see how an Eastern Mayan word would have diffused
 directly into Totonako.

Lowland Mayan area languages **to:k'* 'flint'
 Xicotepec Totonako *lh-takat* 'obsidian'
 (If these do involve borrowing by chance, the direction is unclear;
 recall that Totonako does not have *o* except as a variant of *u* in the
 environment of *q*.)

%%%

Mayan loans in Nawa

Yukatekan *pich* 'ear-pod tree', *Enterolobium cyclocarpum* (*guanacaste*)
 <= pan-Mayan *pit* 'ear pod tree'
 Sayula Mijean *pi:ch* 'manteca de piste' (oil made from zapote
 pit) <= **pi:tzi*
 Nawa *pitz-tli* 'cuexco o hue\$So de cierta fruta' (Molina.82r);
 cf. *pitzi-tl* 'edible black seed from a plant' (semilla negra de una
 hierba comestible: Siméon.387) (Cf. Campbell 1988: 327, Barrera
 Vásquez 1980: 651, Santamaría 1978: 862.)

=====

Mayanization in the Basin of Mexico:

(codes:

V	verb
S	agent (in Mayan, ergative; in Yuta-Nawan, nominative)
A	adjective
O	patient (in Mayan, absolutive; in Yuta-Nawan, accusative)
Po	postposed relational adpositionoid
Pr	preposed relational adpositionoid
R	relative clause
G	possessor NP
m	modifier
h	head
N	noun
#	numeral, quantifier)

Mayanization of Otomi*an [700-900 CE]

pOto-Mangean	Chontal	Otomi*	Matlatzinka
VSO	VOS	VOS	VOS
NA	AN	AN	AN
Nh=Nm	Nm=Nh	Nm=Nh	Nm=Nh
ND	DN	DN	DN

AM-V#A#P	A-V-AM-P	AM+A-V-P	AM+A-V-P
NR	NR	NG	NG
NG	NG	NG	NG
Pr	Pr	Pr	Pr
#N	#N	#N	#N

%%%

1100-1200 CE: Totonako expansion into the Central Gulf coast. Totonako, originally confined to the highlands, acquired a fair number of loans from Wastekan, especially referring to flora and fauna of the Gulf Coast. These loans show that at the time Wastekan still had /q/, which has shifted to /k/ in present-day Wasteko.

1100: Some Wastekans (speaking Kabil) moved to the Grijalva Valley of Chiapas from the Central Gulf Coast directly south of the homeland of 16th century Wastekos.

%%%

Wasteko influence on Totonako: ca 1000 CE [17 items]

The only source for present-day Wasteko /k/ in native words is proto-Mayan *q. /q/ still survived in Wasteko at the time that Totonako started borrowing words from Wasteko, around 1000 CE, as seen in the following three examples:

- [1] Wasteko: *txakaj* <= proto-Mayan ***kaqa:j** 'gumbolimbo tree'
Totonako: XCT *cha:7qa:7t* 'chaca cuerudo, palo mulato'
- [2] Wasteko: *7akity* <= proto-Mayan ***7aqit** 'pricklenut tree'
Totonako: XCT *a:7qe:xtu* 'guásima, olmo'; PAP *aqaxti7* 'palo de guácima'
- [3] Wasteko: *kutxu7* 'parrot' <= proto-Mayan ***quch** 'torcido, con gancho'
Totonako: Xicotepec *kuchú7*, PAP *qochuyu* 'cotorra'
NE Nawa *kocho*
Chayuco Misteko *kusu*

These are clearly borrowed; they would appear to have Wasteko as their source, since the Wasteko form means literally 'hooked' (as the parrot's beak), based on the root *kuch* 'bent, crooked' + the suffix which derives adjectives from positional roots. (Justeson et al. 1985: 27).

The following 4 examples have Totonako /q/ in words apparently borrowed from Wasteko, but where a Mayan origin has not yet been established:

- [4] Wasteko: **kuyu7** 'pa*jaro quicha*n verde'
Papantla Totonako *qóyut* 'parrot' (*perico*); Zapotitlán Totonako

qoyu:t 'parrot' (perico)
Proto-Chinanteko **kia:7* [L] 'parrot'

[5] Wasteko: ?**tok'tok'** 'pa*jaro primavera'
Totonako: PAP *pa:tóqto(q)*, ZPT *pa:to7qtu7* '(pájaro) primavera'
(robin) (Turdus spp.)

[6] Wasteko: **tok'ox** (pescado) 'huavina' (sand perch) (Diplectrum spp.)
Totonako: PAP *to7qo:7xu* 'huevina'

[7] Wasteko: **7akte7** 'e*bano' (palo)
Totonako: PAP *aqti* 'ábalo'

[8] Wasteko: **txatxa7** 'pita(ha)ya'
Totonako: XCT *chacha* 'pitahaya'

[9] Wasteko: **muuw** 'mohuite (hierba)' (water willow) (Justicia spicigera)
Totonako: XCT *mu:way* 'muicle'
Huasteca Nawa: *mowih-tli* 'mohuite'

[10] Wasteko: **thuyu7** 'zuyo (hierba)'
Totonako: XCT *suyu7* 'soyo quelite'

[11] Wasteko: **tyobe:m** 'cornezuelo (espina)' (hat-thorn acacia) (Acacia hindsii)
Totonako: XCT *tzu7hpi:n*, PAP *tzuhpi:n* 'cornezuelo, cuernitos'

[12] Wasteko: **pil** 'lucie*rnaga (insecto)'
Totonako: PAP *pí:lam*, ZPT *ti:lam* 'cocuyo, luciérnaga'

[13] Wasteko: **tx'iliy** 'grillo (insecto)'
Totonako: PAP *tzíli:s* 'grillo común'

[14] Wasteko: **txitxiy** 'palo mora' (Enterolobium cyclocarpus)
Totonako: PAP *chichihti* 'moral' (if this is not from HNawa *chichihtli*, itself from Wasteko)

The following 3 sets have [k] in both Totonako and Wasteko. There are three possible explanations for this: [a] *q had shifted to /k/ in Wasteko and the word spread from Wasteko to Totonako; [b] the word spread from Totonako to Wasteko; [c] the word comes from a third source.

[15] Wasteko *k'alam* 'squash'
common Totonako *ka7la7m* 'a wild vine' (*jinicuil*, *chalahuite silvestre*), 'paterna' (a fruit); Papantla Totonako *ká7lam* 'chalahuitillo tree', Zapotitlán Totonako *ka7la7m* 'jinicuil, chalahuite silvestre' (plant species)

WORK ON THIS

- [16] Wasteko: **kutx'uw** 'to smoke'
Totonako: XCT *u:7xku:7t*, PAP *á:xku:7t* 'tabaco'
- [17] Wasteko: **kobeem** 'ji*cama'
Totonako: XCT *kuye:m*, PAP/ZPT *kuyi:m* 'jícama'

Since there are otherwise no probable loans from Totonako into Wasteko, these should probably be counted as coming from Wasteko. All these terms are animal or plant names.

1150-1200 CE: Toltec decline.

THE END